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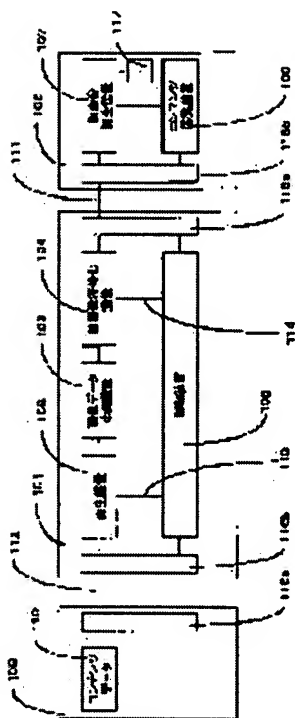
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(54) INFORMATION SERVICE SYSTEM



(57)Abstract:

PROBLEM TO BE SOLVED: To provide a means that reproduces and displays diversified contents data such as high image quality full color still picture data and three- dimensional computer graphics by using a reproduction terminal such as a mobile information terminal and a mobile phone having capability of displaying compressed moving picture data but not having capability of displaying data such as JPEG still picture data.

SOLUTION: The system comprises a servicing unit 109 that stores a plurality of contents data 110 and transmits them via a network interface 116ab and a communication channel 112 and a service relay unit 101 that transmits them to a reproduction terminal 106 via a network interface 115ab and a channel 111. The reproduction terminal 106 having capability of displaying compressed moving picture data but not having

capability of displaying desired contents data can display the desired contents data.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to a computer and the information offer equipment constituted by digital networks, such as LAN (Local Area Network) and a public telephone network, etc.

[0002]

[Description of the Prior Art] Information offer equipment with the structure of a personal computer and the server client mold constituted by digital networks, such as LAN (Local Area Network) and a public telephone network, etc. is considered. As for service provision equipment and 2802, in . drawing 28 which shows the block diagram of common information offer equipment to drawing 28 , 2801 is [a playback terminal and 2803] channels.

[0003] Service provision equipment 2801 possesses the mass store which consists of hard disks etc., and stores contents data in the store concerned, and through a channel 2803, . playback terminal 2802 which sends contents data to the playback terminal 2802 according to the demand from the playback terminal 2802 picks out desired contents data from service provision equipment 2801, and reproduces and displays it. It is necessary to have the capacity of decoding each data with which the playback terminal 2802 constitutes contents data with a natural thing. In the contents data described in HTML (Hyper Text Markup Language) in WWW (World WideWeb) as an example of such information offer, in order to peruse a homepage on a personal computer, what is reproduced and displayed is raised with "Internet Explorer" of Microsoft Corp. used widely. At this time, it is common that a personal computer is used as a playback terminal 2802.

[0004]

[Problem(s) to be Solved by the Invention] Although it is expected that the system of information offer which used the Personal Digital Assistant (PDA: Personal Digital Assistants) and the cellular phone as a playback terminal 2802 is required by the spread of mobile computing devices from now on These playback terminals 2802 have a common thing with the low capacity of CPU (arithmetic and program control) or storage compared with a personal computer. it is not impossible to reproduce and display the contents data described in HTML etc. at all -- be alike and carry out -- it must be used under many limits, such as a display of only alphabetic data, and a display of monochrome static-image data.

[0005] If the new mobile communication network (IMT-2000:International Mobile Telecommunications -2000) using W-CDMA (Wide-band Code Division Multiple Access) etc. spreads, the data transmission capacity per unit time amount of a channel 2803 will improve, and static-image data also with the full color contents data used for information offer, the dynamic-image data accompanied by voice, etc. will be diversified.

[0006] For example, it considers displaying the full color static image (it being hereafter described as a JPEG static image) compressed in the JPEG (Joint Photographic Experts Group) format with a Personal Digital Assistant or a cellular phone. Although the method of giving the function which decodes a JPEG static image is in a Personal Digital Assistant or a cellular phone as 1 implementation means, some

technical problems occur.

[0007] Time amount after the 1st technical problem requires a display until a display is completed is a *****. For example, the amount of data of 768 pixels long obtained with an electronic "still" camera and a 1024 pixels wide JPEG static image is about 100 K bytes. K means 1024 here. If it is going to display this JPEG static image with a drawing cellular phone through a mobile communication network with the data transmission capacity of 64kbps (64000 bits per second), it must wait to complete data transfer for about 13 seconds.

[0008] The 2nd technical problem is that the components mark of a Personal Digital Assistant or a cellular phone increase. This is for having to form the storage for storing temporarily the decoder of a JPEG static image, and a JPEG static image etc. in a Personal Digital Assistant or a cellular phone. Moreover, since it corresponds to the increment in the power consumption by mounting such a function, it becomes large, and a battery is small and serves as constraint which is hard to receive for these terminals characterized by the light weight.

[0009] The 3rd technical problem is hard to respond to diversification of contents data. Whenever the contents data of a new data format appear, it is very difficult to prepare the display function of the contents data concerned in a Personal Digital Assistant or a cellular phone. That is, it is very difficult to do the activity of incorporating contents data playback software at every need that it carries out with the common personal computer etc., with a Personal Digital Assistant or a cellular phone.

[0010] Data processing capacity of this invention is low in comparing with a personal computer, although it has the capacity which displays a compression video data or multiplexing AV data, playback terminals without the capacity which displays data, such as a JPEG static image, such as a Personal Digital Assistant and a cellular phone, are used for it, and it aims at offering a means to reproduce and display variegated contents data, such as high-definition full color static-image data and three-dimension computer graphics.

[0011]

[Means for Solving the Problem] In order to solve this technical problem, this invention stores two or more contents data in the 1st, and according to a demand, it is a network interface course about contents data. It is the service repeating installation changed and sent out to the format which acquires data from the service provision equipment which can be sent out, and enables playback of the data concerned satisfactory also in a user environment (engine performance of a playback terminal). The contents data playback software which works on a common personal computer can be used as a playback means. An image data junction means to relay the static-image data of the contents data origin obtained when this means reproduces the contents data obtained from service provision equipment via the network interface to a dynamic-image coding means, The dynamic-image coding means which can generate a high-definition compression video data from static-image data by gradual image quality complement mold coding, and can be sent out to a playback terminal via the 2nd network interface, . equipped with the control means which can receive button grabbing in a playback terminal, can determine the field of the static-image data encoded to a compression video data, and can be conveyed to a dynamic-image coding means -- thereby Although it has the display capacity of a compression video data, it becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal at the playback terminal without the capacity which displays desired contents data.

[0012] Moreover, in the 1st invention, a control means receives button grabbing in a playback terminal in the 2nd. The control signal for changing the condition of a display of a playback means can be generated, and it can send to a playback means. Moreover, when the field of the static-image data encoded to a compression video data is determined, it tells a dynamic-image coding means and a dynamic-image coding means changes a setup of coding at every need . which is that to which the contents generate the compression video data which changes serially -- thereby Although it has the display capacity of a compression video data, at a playback terminal without the capacity which displays desired contents data The enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal is carried out.

Moreover, the thing of relation to do for contents data display becomes possible by moving the contents of a display vertically and horizontally, and choosing the displayed link information as arbitration.

[0013] Moreover, the voice data of data-format ** specified as the 3rd from the voice data with which the dynamic-image coding means is included in contents data in the 1st invention is also generable. . which is what can multiplex a compression video data and voice data, can generate multiplexing AV data, and can be sent out to a playback terminal via the 2nd network interface -- thereby Although it has the display capacity of multiplexing AV data, at a playback terminal without the capacity which displays desired contents data It becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could display desired contents data with audio playback, in addition were displayed on the playback terminal.

[0014] Moreover, although the 1st service provision equipment and service repeating installation in invention are unified and this has the display capacity of a compression video data in the 4th, it becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal at the playback terminal without the capacity which displays desired contents data.

[0015] The 2nd service provision equipment and service repeating installation in invention are united with the 5th. Moreover, by this Although it has the display capacity of a compression video data, at a playback terminal without the capacity which displays desired contents data The enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal is carried out. Moreover, the thing of relation to do for contents data display becomes possible by moving the contents of a display vertically and horizontally, and choosing the displayed link information as arbitration.

[0016] Moreover, although the 3rd service provision equipment and service repeating installation in invention are unified and this has the display capacity of multiplexing AV data in the 6th, it becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could express desired contents data as the playback terminal without the capacity which displays desired contents data with audio playback, in addition were displayed on the playback terminal.

[0017]

[Embodiment of the Invention] Hereafter, the gestalt of each operation of this invention is explained using drawing 27 from drawing 1 . In addition, this invention is not limited to the gestalt of these operations at all, and can be carried out in the mode which becomes various in the range which does not deviate from the summary.

[0018] (Gestalt 1 of operation) . which explains the 1st operation gestalt of this invention using drawing 1 -11 -- the block diagram of the 1st operation gestalt is shown in drawing 1. In drawing 1 101 a regenerative apparatus and 103 for service repeating installation and 102 Image data repeating installation, 104 a control device and 106 for dynamic-image coding equipment and 105 The communication terminal for multimedia as a playback terminal, 107 contents perusal equipment and 109 for a dynamic-image regenerative apparatus and 108 Service provision equipment, Contents data and 111 110 The channel between a terminal 106 and the service repeating installation 101, 112 The channel between service provision equipment 109 and the service repeating installation 101, The control signal of a regenerative apparatus 102 and 114 113 The control signal of dynamic-image coding equipment 104, 115a and 115b, respectively The network interface of the service repeating installation 101 and the terminal 106 for multimedia communication, As for 116a and 116b, the network interface of the service repeating installation 101 and service provision equipment 109 and 117 are manual operation buttons, respectively.

[0019] The digital static image (it is hereafter described as a still picture) is stored in . service provision equipment 109 explaining the gestalt of the use which this operation gestalt assumes first as contents data 110. The terminal 106 for multimedia communication (it is hereafter described as a terminal) acquires and displays the contents data 110 (here static image) of arbitration in the form which can be displayed on its display means. The magnitude of cellular-phone extent is assumed, the indicating equipment has the small magnitude of a screen, for example, a terminal 106 is a liquid crystal display

which is about 2 inches of diagonal length.

[0020] On the other hand, the static image assumes the data photoed by the digital still camera etc., and becomes a very big display, for example, 1024 pixel x768 pixel, compared with the magnitude of the display of a terminal 106. When displaying such contents data 110 on a terminal 106, the whole contents data 110 is reduced and displayed first. The overview of the contents data 110 displayed on the terminal 106 with the natural thing has the low visibility of details. Then, a part of arbitration of the contents data 110 is expanded to the scale factor of arbitration with the manual operation button 117 provided to the terminal 106, and the detail of the contents data 110 is displayed.

[0021] Next, the terminal 106 explaining actuation and its implementation means of this operation gestalt The dynamic-image regenerative apparatus 107, contents perusal equipment 108, and a manual operation button 117 are provided. For example, International Telecommunications Union telecommunication standardization section (it is hereafter described as ITU-T) advice H.320, H.323, H.324, etc., contents perusal equipment 108 which performs the communication link based on the protocol for channel establishment It is equipment for displaying the contents data 110 obtained from service provision equipment 109 through the service repeating installation 101, a channel 111, and a channel 112, and if there is need, a compression video data will be decoded and displayed using the dynamic-image regenerative apparatus 107. In addition, with book operation gestalt which offers the function for choosing the contents data 110 using a manual operation button 117, a terminal 106 displays the alphabetic data showing the menu contained in the contents data 110 by the function of contents perusal equipment 108 self, and contents perusal equipment 108 displays a compression video data with the dynamic-image regenerative apparatus 107.

[0022] The dynamic-image regenerative apparatus 107 decodes and displays a compression video data based on the control from contents perusal equipment 108. Moreover, the dynamic-image regenerative apparatus 107 continues holding the condition of a display until it stops by the display in the time and newly receives a compression video data, when the compression video data under reception stops.

[0023] The service repeating installation 101 is equipment which changes into a compression video data delivery and the contents data 110 which cannot be expressed as contents perusal equipment 108, and sends the contents data 110 which are located in the middle of a terminal 106 and service provision equipment 109, and become contents perusal equipment 108 from alphabetic data to the dynamic-image regenerative apparatus 107.

[0024] The configuration of the control unit 105 which controls service repeating installation 101 explaining actuation of the service repeating installation 101 is shown in drawing 2. For 201, as for the communications control section and 203, in drawing 2, a channel with network interface 116b, and 204 and 205 are [a junction control section and 202] channels with network interface 115a.

[0025] According to the protocol for [, such as the approach of a terminal 106 and the service repeating installation 101 specified by ITU-T recommendation H.245,] channel establishment, communications control **** 202 performs communicative fundamental control. By capacity exchange with a terminal 106 and the service repeating installation 101 based on the protocol for channel establishment, such as ITU-T recommendation H.245, in the case of communication link initiation, communications control **** 202 acquires the data display capacity of a terminal 106, and memorizes it to the storage which it has in a period until a communication link is completed, and the interior of oneself. After the communication link with a terminal 106 and the service repeating installation 101 is established by the communications control section 202, the main functions of a control unit 105 are offered by the junction control section 201.

[0026] Suitably with reference to the data display capacity of the terminal 106 memorized in the communications control section 202, the junction control section 201 changes the contents data 110 into remaining as it is or a compression video data, and sends them to a terminal 106. If a certain contents data 110 in service provision equipment 109 are specified from a terminal 106, the junction control section 201 will pick out the specified contents data 110 from service provision equipment 109 via a channel 203 and network interface 116ab.

[0027] Next, with reference to the data display capacity of the terminal 106 memorized in the

communications control section 202, the junction control section 201 will send the appointed contents data 110 to a terminal 106 by channel 204 course as it is, if a display of all the data of the appointed contents data 110 is possible for the contents perusal equipment 108 of a terminal 106.

[0028] If a display of all the data of the contents data 110 with which the contents perusal equipment 108 of a terminal 106 was specified is not possible, the junction control section 201 will control a regenerative apparatus 102 and dynamic-image coding equipment 104, will change the appointed contents data 110 into a compression video data, and will send them to a terminal 106.

[0029] If a display of some data of the contents data 110 with which the contents perusal equipment 108 of a terminal 106 was specified is possible, the junction control section 201 will urge selection of the method of presentation to a terminal 106. When a terminal 106 chooses the display using contents perusal equipment 108, the junction control section 201 sends only a displayable data to drawing and a terminal 106 with contents perusal equipment 108 from the appointed contents data 110. When a terminal 106 chooses the display using the dynamic-image regenerative apparatus 107, the junction control section 201 changes the appointed contents data 110 into a compression video data, and sends them to a terminal 106.

[0030] The contents data 110 are changed into a compression video data, and the processing sent to a terminal 106 is explained. With this operation gestalt, the contents data 110 are used as static-image data, such as a JPEG (Joint Photographic Experts Group) format, and it considers as the software which displays static-image data, such as a JPEG format of working a regenerative apparatus 102 on a common personal computer.

[0031] A regenerative apparatus 102 displays the contents data 110 specified with the control signal 113 from the junction control section 201 in a control device 105 on drawing and the image data repeating installation 103 from service provision equipment 109 via a channel 112 and network interface 116ab. In addition, I hear that "a display" said here is actually projected on a display etc., and a certain need does not have it, and it means that a regenerative apparatus 102 sends out data to the same interface as a display display etc. like the after-mentioned.

[0032] Based on the control signal 114 from the junction control section 201 in a control device 105, dynamic-image coding equipment 104 generates the static-image data of the image data repeating installation 103 to the contents data 110 origin, and sends drawing and a compression video data for them to a terminal 106 via a channel 111 and network interface 115ab.

[0033] The image data repeating installation 103 in this invention which explains the implementation means of the image data repeating installation 103 and actuation here must fulfill two next conditions.

[0034] The 1st condition is enabling it to use available contents playback software easily [a commercial item etc.] in a regenerative apparatus 102 first. Although the contents data 110 in this operation gestalt were used as static-image data, such as a JPEG format, as an example, treating the contents data 110 of various formats in actual use is expected. For example, the homepage described in HTML (Hyper Text Markup Language), the three-dimension computer graphics data described by VRML (Virtual Reality Modeling Language) can be considered.

[0035] Thus, in order to correspond to the various contents data 110, a regenerative apparatus 102 must be equipped with a number equivalent to the class of contents data 110 of regenerative functions. In this case, if available contents playback software can be used easily [a commercial item etc.] as a means to realize playback of each contents data 110, the service repeating installation 101 is cheaply [easily and] realizable. Moreover, correspondence to the contents data 110 of a new format can also be made quick.

[0036] The 2nd condition is telling dynamic-image coding equipment 104, without reducing the image quality of the contents data 110 displayed with the regenerative apparatus 102. Image data repeating installation 103 in this operation gestalt is realized in the video memory (it is hereafter described as V-RAM) used with a common personal computer etc. By using V=RAM, the image data repeating installation 103 can provide a regenerative apparatus 102 with the same interface as the data display to the indicating equipment by CRT (Cathode Ray Tube) used with a common personal computer. That is, it is regarded as "the display" with sending out in the interface concerned.

[0037] In addition, since the function which takes out the data in V-RAM to Windows-NT of the

operating system Corp. currently generally used (it is hereafter described as OS), for example, Microsoft, **, and an application program with a personal computer is offered, dynamic-image coding equipment 104 can obtain the static-image data of the contents data 110 origin from V-RAM easily using this function.

[0038] Said two conditions can be filled with realizing image data repeating installation 103 in V-RAM, without newly forming a special control program. That is, the static-image data display software which is a regenerative apparatus 102 can transmit the static-image data of the contents data 110 origin to dynamic-image coding equipment 104 by displaying a static image on indicating equipments, such as CRT, (the data forwarding it can consider that is the same as that of or the "display" being sent out to V-RAM), without performing special modification.

[0039] Then, the configuration of . dynamic-image coding equipment 104 explaining dynamic-image coding equipment 104 is shown in drawing 3 . drawing 3 -- setting -- 301 -- for the dynamic-image coding section and 304, as for the static-image data from the image data repeating installation 103, and 306, control information memory of operation and 305 are [the data acquisition section and 302 / a shared memory and 303 / a compression video data and 307] control signals.

[0040] the 1st features with two features of describing the dynamic-image coding equipment 104 in this operation gestalt below are performing general dynamic-image coding, when the static-image data set as the object of coding change with the passage of time like animation, performing dynamic-image coding by gradual image-quality complement processing, when there is no time-amount change like static-image data in the static-image data set as the object of coding, and enabling the decode of high-definition static-image data.

[0041] The 2nd features are that the generation method of a compression video data, for example, filtering performed before coding, is changed accommodative according to properties, such as the property of the static-image data set as the object of dynamic-image coding, for example, an alphabetic character, natural drawing, and computer graphics, and it generates a high-definition compression video data.

[0042] The information which specifies actuation of dynamic-image coding equipment 104 is stored in . actuation control information memory 304 explaining a means to realize actuation of the dynamic-image coding equipment 104 in this operation gestalt, and said two features, via the control signal 114. In this operation gestalt, the information stored in the control information memory 304 of operation The location of the static-image data of the contents data 110 origin which is stored in the image data repeating installation 103 and which can be encoded, For example, the address on V-RAM of the pixel of a rectangle field upper left edge, magnitude of the static-image data of the contents data 110 origin, for example, perpendicular to a horizontal -- the class of the number of pixels of each direction, and static-image data of the contents data 110 origin -- For example, the location of the field actually encoded within static-image data of the contents data 110 origin, such as an alphabetic character, natural drawing, and computer graphic, For example, the area size actually encoded within the address on V-RAM of the pixel of a rectangle field upper left edge, and the static-image data of the contents data 110 origin, for example, perpendicular in a rectangle field being level -- the number of pixels of each direction, and the number of bits per unit time amount of a compression video data (bit rate) -- It is the authorization flag of frame number [per unit time amount of a compression video data] (frame rate), resolution [of a compression video data] and the mode of coding processing, i.e., gradual image quality complement mode, common cine-mode, and dynamic-image coding equipment 104 of operation etc.

[0043] The mimetic diagram showing the relation of each field stored in the control information memory 304 of operation is shown in drawing 4 . The memory area for a display in which the image data repeating installation 103 has 401 in drawing 4 , The static-image data of the contents data 110 origin with which 402 was displayed on the zero of a memory area 401, and 403 was displayed on the image data repeating installation 103 and which can be encoded, the representation point of pinpointing the location of the representation point that 404 pinpoints the location of the static-image data 403 of the contents data 110 origin, the field which actually encodes 405 within the static-image data 403 of the contents data 110 origin, and the field 405 which actually encodes 406 -- it comes out.

[0044] In drawing 4 X_m and Y_m , respectively Moreover, the longitudinal direction of the memory area 401 for a display, The number of pixels of a lengthwise direction, and X_d and Y_d , respectively The longitudinal direction of the static-image data 403, the number of pixels of a lengthwise direction, and (x_d0 and y_d0) -- the location in the memory area 401 for a display of the representation point 404, and X_t and Y_t -- respectively -- the number of pixels of the longitudinal direction of the coding field 405, and a lengthwise direction, and (x_t0 and y_t0) -- the location in the memory area 401 for a display of the representation point 406 -- it comes out.

[0045] . data acquisition section 301 which is the flow chart with which drawing 5 expresses actuation of the data acquisition section 301 According to the timer which it has in the interior, the authorization flag of the control information memory 304 of operation of operation is referred to a certain period (step 501). The authorization flag of operation which permits generation of a compression video data acquires static-image data from the image data repeating installation 103 based on the information about the static-image data for [which is stored in the control information memory 304 of operation as it is effective] coding (step 503). (step 502)

[0046] Next, the data acquisition section 301 performs expansion or contraction processing to the acquired static-image data based on the information about the resolution of the magnitude of the static-image data stored in the control information memory 304 of operation, a class, and a compression video data, and makes the static-image data of predetermined resolution. If there is furthermore need, filtering according to the class of static-image data etc. will be performed, and pretreatment for obtaining a high-definition compression video data will be performed.

[0047] After performing such processing, the obtained static-image data are stored in a shared memory 302 (step 503), the dynamic-image coding section 303 is ordered to perform initiation of coding processing through a control signal 307 (step 504), and it waits to complete coding processing in the dynamic-image coding section 303 (step 505).

[0048] When [in the dynamic-image coding section 303] termination of coding processing is detected and a mode of operation is gradual image quality complement mode, after making the data acquisition section 301 into the authorization flag invalid of the control information memory 304 of operation of operation (step 506), it starts step 501 again according to a timer.

[0049] When the mode of the coding processing stored in the control information memory 304 of operation is usually a cine mode, a timer generates a signal so that it may be in agreement with the frame rate of the compression video data with which the period of a series of processings (from step 501 to step 505) which the data acquisition section 301 performs is stored in the control information memory 504 of operation. In this case, the dynamic-image coding section 303 generates and outputs the video data of one frame for every period. That is, the data acquisition section 301 maintains the frame rate of a compression video data.

[0050] On the other hand, when the mode of the coding processing stored in the control information memory 304 of operation is gradual image quality complement mode, while the dynamic-image coding section 303 maintains the frame rate of the compression video data stored in the control information memory 304 of operation, gradual image quality complement mold coding processing generates two or more frame data.

[0051] The dynamic-image coding section 303 will generate and output the desired compression video data 306 with reference to the information about the bit rate of the compression video data stored in the control information memory 304 of operation, a frame rate, and resolution, if the processing initiation instruction from the data acquisition section 301 is received. After ending coding processing, the dynamic-image coding section 303 tells that to the data acquisition section 301 through a control signal 307.

[0052] When the mode of coding processing is usually a cine mode, the dynamic-image coding section 303 performs general dynamic-image coding. General dynamic-image coding means the method which combined coding in a frame, and inter-frame predicting coding like the compression video data of for example, MPEG-1 (Motion Picture Image Coding Experts Group-1:ISO/IEC11172) format.

[0053] One of the features in this operation gestalt is actuation of the dynamic-image coding section 303

in case a coding processing mode is gradual image quality complement mode. The outline of gradual image quality complement mold coding processing is described in drawing 6. Drawing 6 (a) shows the concept of dynamic-image coding processing in MPEG-1 general format etc., and drawing 6 (b) shows the concept of gradual image quality complement mold coding processing.

As for an incompressible image frame, 604, and 605 and 606 in drawing 6 (a), a compression image frame, 607, and 608 and 609 are [601, and 602 and 603] reference image frames, and in drawing 6 (b), as for an incompressible image frame, 613, and 614 and 615, a compression image frame, 616, and 617 and 618 are [610, and 611 and 612] reference image frames, and processing changes to the right from the left with the passage of time in both drawings.

[0054] Drawing 6 (a) is used first and dynamic-image coding processing in MPEG-1 general format etc. is outlined. In the coding processing to the incompressible image frame 601, coding in a frame which consists of a discrete cosine transform (DCT:Discrete Cosine Transform) and quantization is performed, consequently the compression image frame 604 is obtained. Next, it moves to coding of the incompressible image frame 602. As for coding of the incompressible image frame 602, inter-frame predicting coding is performed. In this coding, a reference image frame is needed for motion compensation processing. In this case, a reference image frame uses the reference image frame 607 generated from the compression image frame 604 obtained previously. Reference image frame 607 lost-motion compensation processing is performed with the incompressible image frame 602, and the compression image frame 605 is obtained. Next, it moves to coding of the incompressible image frame 603. Coding of the incompressible image frame 603 is also inter-frame predicting coding. In this case, a reference image frame uses the reference image frame 608 made using the compression image frame 605 and the reference image frame 607 which were obtained previously. Reference image frame 608 lost-motion compensation processing is performed with the incompressible image frame 603, and the compression image frame 606 is obtained. The same coding processing as the following is repeated.

[0055] Then, although the great portion of . gradual image quality complement mold coding processing in which gradual image quality complement mold coding processing is outlined using drawing 6 (b) is the same as dynamic-image coding processing in MPEG-1 general format etc., difference is in the incompressible image frame and quantization step value to be used. In the coding processing to the incompressible image frame 610, coding in a frame is performed, consequently the compression image frame 613 is obtained. In order to reduce the amount of data of the compression image frame 613 at this time, a coarse (large) quantization step value is used.

[0056] Next, it moves to coding of the incompressible image frame 611. Since gradual image quality complement processing is aimed at data without time amount change of static-image data etc., the incompressible image frame 611 used here is one of the differences with dynamic-image coding processing in MPEG-1 format with the common point using the same data as the incompressible image frame 610 etc. As for coding of the incompressible image frame 611, inter-frame predicting coding is performed. In this coding, a reference image frame is needed for motion compensation processing. In this case, a reference image frame uses the reference image frame 616 generated from the compression image frame 613 obtained previously. The compression image frame 614 is obtained from the incompressible image frame 611 and the reference image frame 616. In order that the incompressible image frame 611 may use the same data as the incompressible image frame 610, since it is known that the motion vector between the incompressible image frame 611 and the reference image frame 616 is zero, it does not perform retrieval of a motion vector, but performs quantization processing to the difference of the incompressible image frame 611 and the reference image frame 616. At this time, the compression image frame 614 with information more minute than the compression image frame 613 can be obtained as a quantization step value by using a value finer (small) than the quantization step value used when the compression image frame 613 was generated.

[0057] Next, it moves to coding of the incompressible image frame 612. Coding of the incompressible image frame 612 is also inter-frame predicting coding. In this case, a reference image frame uses the reference image frame 617 made using the compression image frame 614 and the reference image frame 616 which were obtained previously. The incompressible image frame 612 is the same as the

incompressible image frame 610, and coding processing performs the same processing as the time of generating the compression image frame 614, and obtains the compression image frame 615. However, a value still finer (small) than the quantization step value when generating the compression image frame 614 is used for a quantization step value. Thereby, below . used as a compression image frame with information still more minute than the compression image frame 614 obtained previously, making a quantization step value fine (small) gradually, the compression image frame 615 repeats the same coding processing, and when a quantization step value becomes sufficiently fine, it ends coding processing.

[0058] Signs that image quality improves gradually and it goes in gradual image quality complement mold coding processing are explained using a formula. A series of formulas are described in drawing 7 . The notation of each item in drawing 7 originates in drawing 6 (b), as long as there is no notice.

[0059] The playback image frame F1 obtained from the 1st compression image frame 613 can be expressed like a formula 1. In a formula 1, R1 expresses the reference image frame 616 for the degraded minute of the image quality according [x1] to a quantization error again. Strictly, the playback image frame F1 and the reference image frame R1 do not become equal in order to perform decoding, such as reverse DCT processing, with equipment different, respectively. However, since the difference between the playback image frame F1 and the reference image frame R1 does not have big effect on the essence of explanation here, it disregards a difference. The relation between the playback image frame F2 and the reference image frame R2 is also the same.

[0060] It can express like P1 in the 2nd compression image frame 614 and drawing 7 , and the ** type 2. In a formula 2, x2 expresses the degraded minute of the image quality by the quantization error. The playback image frame F2 obtained from the 2nd compression image frame 614 can be expressed like a formula 3.

[0061] It can express like P2 in the 3rd compression image frame 615 and drawing 7 , and the ** type 4. In a formula 4, x3 expresses the degraded minute of the image quality by the quantization error. The playback image frame F3 obtained from the 3rd compression image frame 615 can be expressed like a formula 5.

[0062] Since the quantization step value used in case each compression image frame is generated is gradually made fine (small) and it goes, degradation of the image quality by each quantization error, x1, x2, and x3 become relation like a formula 6. Therefore, a quantization error when a quantization step value becomes sufficiently fine (small) decreases, so that it can be disregarded, and the image quality of the playback image frame obtained as a result becomes very close to the incompressible image frame 610.

[0063] in addition, . which can be adjusted so that the amount of data of the compression image frames 614 and 615 obtained by inter-frame predicting coding can also obtain a desired bit rate by choosing a quantization step value appropriately -- it can display by the image quality very near a former image by changing a static image into a compression video data by the above approaches.

[0064] All the information stored in the control information memory 304 of operation can be rewritten via a control signal 114 at the time of day of arbitration, and the data acquisition section 301 and the dynamic-image coding section 303 can acquire the information stored in the control information memory 304 of operation for every unit of processing, and can change the detail of processing based on the information.

[0065] Next, the manual operation button 117 of the . terminal 106 explaining how to carry out the enlarged display of some contents data 110 is a configuration as shown in drawing 8 . In drawing 8 , the signal with which they corresponded, respectively when the direction carbon button with which 801 shows the direction of vertical and horizontal, and 802 are dial carbon buttons with which an initiation carbon button and 804 consist in a menu button and 803, and a termination carbon button and 806 consist of the figures from 0 to 9, notation *, and notation # in a clear carbon button and 805 and the depression of each carbon button was carried out is generated.

[0066] Drawing 9 is the example of a display of the still picture which is the contents data 110 in a terminal 106. In drawing 9 , the rectangular frame showing the field which carries out the enlarged

display of 901, the rectangular frame showing the field where a request carries out the enlarged display of 902, and 903 are the rectangular frames showing the field as for which the 2nd request carries out an enlarged display.

[0067] In . drawing 9 explaining the example of button grabbing at the time of carrying out the enlarged display of some contents data 110 using drawing 9 , and the example of a display condition, (b) expresses the whole contents data 110 displayed on the indicating equipment of a terminal 106 in . drawing 9 which is an example when (a) indicates the contents data 110 (it is a static image in the case of this example) stored in service provision equipment 109 by full size. That is, the whole static image is reduced and displayed according to the magnitude of the display of a terminal 106. In . drawing 9 made into the initial state of a static-image display of this condition with this operation gestalt, (c) is in the display condition immediately after pushing the direction carbon button 801 and specifying the direction of one of four directions after an initial state. 901 is a rectangular frame showing the field which carries out an enlarged display, and after it pushes the direction carbon button 801, when there is not further depression of the direction carbon button 801 or a depression of the initiation carbon button 803, it is automatically eliminated between fixed time amount, for example, 3 seconds. In . drawing 9 to which a terminal 106 performs a display and elimination of a rectangle frame itself according to the depression of a manual operation button 117 etc. (d) After pushing the direction carbon button 801 and displaying a frame 901, the count depression of arbitration of the direction carbon button 801 is carried out succeeding. In . drawing 9 which is in the condition when moving a frame 901 to the field 902 as for which a request carries out an enlarged display (e) In . drawing 9 which is in the condition which specified the field 902 which carries out an enlarged display with a frame 901, and carried out the enlarged display by the depression of the initiation carbon button 803 (f) In . drawing 9 which is in the condition which furthermore pushed the direction carbon button 801, displayed the frame 901, and specified the desired enlarged display field 903 (g) . which is in the condition which carried out the enlarged display of the enlarged display field 903 -- the enlarged display of some contents data 110 displayed on the terminal 106 by the above button grabbing is carried out.

[0068] Then, if the depression of the initiation carbon button 803 is carried out after carrying out the count depression of arbitration of the direction carbon button 801 from an initial state like . drawing 9 (b) explaining a means to realize such an enlarged display and specifying a desired enlarged display field, the dynamic-image regenerative apparatus 107 will send the location of assignment **** on the display of a terminal 106, and magnitude to the junction control section 201.

[0069] It asks for the junction control section 201 by count from the location of the field which the contents data 110 newly encode, the location of the appointed field to which magnitude was sent from the terminal 106, and magnitude, it updates the location and magnitude of a field which are actually encoded within the information concerned on the control information memory 304 of operation, i.e., bit map data, and confirms an authorization flag of operation further.

[0070] Dynamic-image coding equipment 104 can generate a new compression video data according to the information on this updated control information memory 304 of operation, consequently a terminal 106 can expand a desired viewing area.

[0071] In addition, although it assumes that the format of the compression video data which can be treated with the dynamic-image coding equipment 104 and the dynamic-image regenerative apparatus 107 in this operation gestalt is based on MPEG-4 standard (ISO/IEC14496), it is possible to use the compression video data obtained by the coding method which uses together coding in a frame, such as MPEG-1 (ISO/IEC11172), MPEG-2 (ISO/IEC13818), and ITU-T recommendation H.261, H.263, and inter-frame predicting coding.

[0072] Moreover, it is also possible to realize with the image data repeating installation 103 of this operation gestalt using storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory. The block diagram of the image data repeating installation which used semiconductor memory, such as DRAM, for drawing 10 is shown.

[0073] As for a shared memory and 1006, in drawing 10 , the memory to which the write-in control section carried out 1001, and 1002 carried out mutually-independent [of a read-out control section, and

1003 and 1004], respectively, and 1005 are [the signal line for static-image data of the contents data 110 origin from a regenerative apparatus 102 and 1007] the signal lines for static-image data of the contents data 110 origin to dynamic-image coding equipment 104.

[0074] The busy condition of the memory 1003 of the present time of day and memory 1004 is recorded on the shared memory 1005. It reads with the write-in control section 1001. A control section 1002 and the . write-in control section 1001 which can be written from both sides With reference to a shared memory 1005, the memory (memory 1003 or memory 1004) which can write in static-image data is got to know. . read-out control section 1002 which writes in the static-image data from the regenerative apparatus 102 obtained by the memory concerned via a signal line 1006 The memory (memory 1003 or memory 1004) on which the newest static-image data which can be read are recorded with reference to the shared memory 1005 is got to know, static-image data are read from the memory concerned, and it sends to dynamic-image coding equipment via a signal line 1007.

[0075] A write-in control section offers an interface as if it was displays, such as video memory, to a regenerative apparatus 102. Thereby, it becomes possible as a regenerative apparatus 102 to carry out marketing etc. and to use an available still picture display etc. easily.

[0076] In addition, image data repeating installation 103 can also be realized only using the memory 1003 in drawing 10 or memory 1004, and either. Moreover, it is also possible to realize image data repeating installation 103, using the memory 1003 or memory 1004 in drawing 10 , and the memory of the same function three or more pieces.

[0077] With the gestalt of this operation, a static image can be expressed as the terminal 106 without a static-image display function as mentioned above by changing static-image data, such as the contents data 110 in service provision equipment 109, i.e., a JPEG format etc., into a compression video data with the service repeating installation 101.

[0078] Moreover, a static image can be displayed by high definition (: image quality same with playback - having sent out the acquired contents data 110 with the regenerative apparatus 102) comparable as former image quality by generating the compression video data based on a gradual image quality complement. Moreover, since there is little amount of data compared with JPEG static-image data, the compression video data can shorten the data transfer completion latency time, and can display contents data on a terminal 106 quickly.

[0079] By furthermore using video memory (V-RAM) for the image data repeating installation 103, available static-image display software can be used easily [a commercial item etc.], and service repeating installation 101 corresponding to the contents data 110 of various data format can be realized easily. Moreover, by using semiconductor memory, such as DRAM, with the image data repeating installation 103, the memory area 401 for a display can be enlarged compared with the case where V-RAM is used, consequently the bigger contents data 110 can be displayed now, and the practical effectiveness is large.

[0080] (Gestalt 2 of operation) . which explains the 2nd operation gestalt of this invention using drawing 11 -15 -- the block diagram of the 2nd operation gestalt is shown in drawing 11 . For 1101, as for a regenerative apparatus and 1103, in drawing 11 , service repeating installation and 1102 are [a control unit and 1104] the control signals of a regenerative apparatus 1102. Other components are the same as the component in the gestalt of the 1st operation. The main difference between the configuration of the 2nd operation gestalt and the configuration of the 1st operation gestalt is the regenerative apparatus 1102 and control unit 1103 in the service repeating installation 1101.

[0081] Although the . terminal 106 explaining the gestalt of the use which this operation gestalt assumes first is the same as the terminal 106 in the gestalt of the 1st operation, the contents data 110 to display differ. The contents data 110 currently assumed with the gestalt of the 2nd operation are a homepage described in HTML (Hyper Text Markup Language), and are constituted by alphabetic data and static-image data. When displaying such contents data 110 on a terminal 106, the whole contents data 110 is reduced and displayed first. The contents data 110 displayed on the terminal 106 with the natural thing have the low visibility of details. Then, a part of arbitration of the contents data 110 is expanded to the scale factor of arbitration with the manual operation button 117 provided to the terminal 106, and the

detail of the contents data 110 is displayed. In addition, the homepage currently displayed is moved vertically and horizontally, or other homepages associated in URL (Universal Resource Locator) are chosen and displayed.

[0082] Next, "Internet Explorer of the homepage browser Corp. which works on a common personal computer as a . regenerative apparatus 1102 explaining actuation and its implementation means of this operation gestalt, for example, Microsoft," is used.

[0083] Next, a control unit 1103 is explained. The configuration of a control unit 1103 is shown in drawing 12 . As for a junction control section and 1202, in drawing 12 , 1201 is [a channel with network interface 116b and 1203] channels with network interface 115b. Other components are the same as the component of the control unit 105 in the gestalt of the 1st operation.

[0084] Communications control **** 202 performs fundamental control of the communication link with a terminal 106 and the service repeating installation 1101 like the 1st operation gestalt. After the communication link with a terminal 106 and the service repeating installation 1101 is established by the communications control section 202, the main functions of a control unit 1103 are offered by the junction control section 1201. The junction control section 1201 performs selection of data sent to terminal 106, i.e., alphabetic data, and compression video data ** like the case of the 1st operation gestalt.

[0085] Changing the contents data 110 into a compression video data, the . regenerative apparatus 1102 explaining the processing sent to a terminal 106 displays the contents data 110 specified with the control signal 1104 from the junction control section 1201 in a control unit 1103 on drawing and the image data repeating installation 103 from service provision equipment 109 via a channel 112 and network interface 116ab.

[0086] Based on the control signal 114 from the junction control section 1201 in a control device 1103, dynamic-image coding equipment 104 generates the static-image data of the image data repeating installation 103 to the contents data 110 origin, and sends drawing and a compression video data for them to a terminal 106 via a channel 111 and network interface 115ab.

[0087] The actuation about the display of homepage ** described with the contents data 110 in the terminal 106 in the 2nd operation gestalt, i.e., HTML, has main display modification ** of the contents data 110 based on migration (scrolling display) in the display by the whole contents data 110, the enlarged display of a part of arbitration, and the direction of four directions of the contents data 110, and the link information (URL) in the contents data 110.

[0088] Hereafter, since the display by the whole . contents data 110 and the enlarged display of a part of arbitration explaining the actuation and the implementation means of this operation gestalt in each actuation are the same as the approach of carrying out the enlarged display of some contents data 110 indicated to explanation of the 1st operation gestalt, they omit the explanation.

[0089] . junction control section 1201 explaining the actuation and the implementation means of this operation gestalt in migration in the direction of four directions of the contents data 110 The information about the contents data 110 stored in the storage of the interior at the control information memory 304 of operation in dynamic-image coding equipment 104, Namely, the location (xd0, yd0) and magnitude Xd of the static-image data 403 which are stored in the image data repeating installation 103 and which can be encoded, Yd, and the location (xt0, yt0) and magnitude Xt of a field 405 which are actually encoded within the static-image data 403, The location of the pointing cursor in the number of pixels which holds Yt, in addition expresses one transfer unit to the direction of four directions of a regenerative apparatus 1102, and a field 405, and the number of pixels showing one transfer unit of pointing cursor are held.

[0090] If the operation mode carries out the depression of the direction carbon button 801 in the terminal 106 used as "scrolling actuation", the dynamic-image regenerative apparatus 107 will generate the direction signal meaning the direction of appointed, and will send it to the junction control section 1201 in the service repeating installation 1101 via network interface 115ab and a channel 111. A terminal 106 generates this gentleman ***** at every depression of the direction carbon button 801, and sends it to the service repeating installation 1101.

[0091] If a direction signal is received, processing as shown in drawing 13 will be performed, dynamic-

image coding equipment 1103 changes the field of assignment of the contents data 110 into a compression video data as the result, and the junction control section 1201 sends it to a terminal 106. [0092] If the direction signal from a terminal 106 is received (step 1301), junction control section 1201 which explains actuation of the junction control section 1201 using drawing 13 will usually make a cine mode the mode of operation in the control information memory 304 of operation, and will confirm an authorization flag of operation (step 1302), and will compute the locations X_t and Y_t after only one transfer unit moves in the appointed direction in a field 405 (step 1303).

[0093] If the new location of a field 405 is in a field 403 (step 1304), it will rewrite to the value which computed the location of the field actually encoded within static-image data at step 1303 (step 1305), and will wait for reception of a new direction signal (step 1301).

[0094] When the new location of a field 405 exceeds a field 403, (step 1304) and a control signal 1104 are moved towards only one transfer unit's assignment of the location of the delivery field 403 with a regenerative apparatus 1102 (step 1306), and it waits for reception of a new direction signal (step 1301).

[0095] If the increment in 1 unit time amount of the receiving latency time of a direction signal is carried out (step 1307) and the latency time concerned exceeds a predetermined threshold when a direction signal is not received (step 1301) (step 1308), the mode of operation in the control information memory 304 of operation will be made into gradual image quality complement mode, and an authorization flag of operation will be confirmed (step 1309), and it will wait for reception of a new direction signal (step 1301). By this processing, the dynamic-image coding equipment 104 in the gestalt of this operation will suspend delivery and processing for the high-definition contents data 110 to a terminal 106 automatically, if the receiving latency time of a direction signal exceeds predetermined time amount.

[0096] Using pointing cursor, the terminal 106 explaining the actuation and the implementation means of this operation gestalt in display modification of the contents data 110 by the link information (URL) in the contents data 110 specifies the link information in the contents data 110, and changes the display of the contents data 110. Pointing cursor offers a function similar to the mouse cursor in a personal computer, and is displayed on the contents data 110 and coincidence by the display of a terminal 106. Terminal 106 itself performs the display to the indicating equipment of pointing cursor, and a terminal 106 also performs migration of pointing cursor according to the depression of the direction carbon button 801.

[0097] If the depression of the direction carbon button 801 is carried out in the condition that pointing cursor is displayed on the terminal 106, while pointing cursor will move towards assignment of only a predetermined transfer unit, a terminal 106 tells the migration direction and movement magnitude of pointing cursor to the junction control section 1201 via network interface 115ab and a channel 111.

[0098] junction control section 1201 which shows the flow of the junction control section 1201 about migration of pointing cursor of operation to drawing 14 If the signal about the pointing cursor advance from a terminal 106 is received (step 1401) Usually make the mode of operation in the control information memory 304 of operation into a cine mode, and an authorization flag of operation is confirmed (step 1402). The location of the information 403 which oneself holds, i.e., a field, the location of a field 405, the location of the pointing cursor in a field 405, and the number of pixels showing one transfer unit of pointing cursor, the migration direction of the information about the pointing cursor advance from a terminal 106, i.e., pointing cursor, and movement magnitude -- since -- the location of new pointing cursor is computed (step 1403).

[0099] It can ask for the location in the field 401 of pointing cursor because add X shaft orientations to the location of the pointing cursor in a field 405 and it adds $xd0+xt0$ and $yd0+yt0$ to each Y shaft orientations.

[0100] If the location of new pointing cursor is in a field 403 (step 1404), the junction control section 1201 will update the location of the pointing cursor on delivery and a regenerative apparatus 1102 for a control signal 1104 to a regenerative apparatus 1102 (step 1405).

[0101] When the location of new pointing cursor is not in a field 403, (step 1404) and the junction control section 1201 perform step 1405, after moving the contents data 110 towards migration of

pointing cursor (step 1406).

[0102] If the increment in 1 unit time amount of the receiving latency time of a migration signal is carried out (step 1407) and the latency time concerned exceeds a predetermined threshold when a migration signal is not received (step 1401) (step 1408), the mode of operation in the control information memory 304 of operation will be made into gradual image quality complement mode, and an authorization flag of operation will be confirmed (step 1409), and it will wait for reception of a new migration signal (step 1401). By this processing, the dynamic-image coding equipment 104 in the gestalt of this operation will suspend delivery and processing for the high-definition contents data 110 to a terminal 106 automatically, if the receiving latency time of a migration signal exceeds predetermined time amount.

[0103] If the depression of the initiation carbon button 803 which means decision of link-information selection is carried out after moving to the location of the link information of a request of pointing cursor in a terminal 106, a terminal 106 will tell selection decision to the junction control section 1201 via network interface 115ab and a channel 111.

[0104] If the signal meaning selection decision of a link information is received (step 1501), junction control section 1201 which shows the flow of the junction control section 1201 about selection decision of a link information of operation to drawing 15 will usually make a cine mode the mode of operation in the control information memory 304 of operation, and will confirm an authorization flag of operation (step 1502), and will send the same signal as the depression of the left carbon button of a mouse to a regenerative apparatus 1201 with a control signal 1104 (step 1503). The new contents data 110 are displayed on a terminal 106 because a regenerative apparatus 1201 displays the new contents data 110 related with the link information by this on the image data repeating installation 103.

[0105] If the increment in 1 unit time amount of the receiving latency time of a definite signal is carried out (step 1504) and the latency time concerned exceeds a predetermined threshold when a definite signal is not received (step 1501) (step 1505), the mode of operation in the control information memory 304 of operation will be made into gradual image quality complement mode, and an authorization flag of operation will be confirmed (step 1506), and it will wait for reception of a new definite signal (step 1501). By this processing, the dynamic-image coding equipment 104 in the gestalt of this operation will suspend delivery and processing for the high-definition contents data 110 to a terminal 106 automatically, if the receiving latency time of a definite signal exceeds predetermined time amount.

[0106] With explained . book operation gestalt which takes lessons from modification of the display condition of the regenerative apparatus 1102 by the control signal 1104, for example, migration on the four directions of a display, and selection of a link information and modification of the contents of a display with pointing cursor, the regenerative apparatus 1102 and the control device 1103 should work on the same operating system, and shall have constituted the run unit of a process and a called program, respectively.

[0107] As described previously, the junction control section 1201 in a control device 1103 generates the control signal 1104 which directs modification of the display condition of a regenerative apparatus 1102 based on button grabbing in a terminal 106, and sends it to a regenerative apparatus 1102. The control signals 1104 at this time are the same contents as the event signal generated by the depression of a keyboard, or mouse actuation in a regenerative apparatus 1102. The junction control section 1201 is sent to a regenerative apparatus 1102 using the interprocess communication function in which an operating system offers this control signal 1104.

[0108] When the contents playback software currently used with the regenerative apparatus 1102 is operating independently regardless of this operation gestalt, the event signal generated by the depression of a keyboard or mouse actuation is sent to contents playback software using the process or communication facility which an operating system offers.

[0109] . which regenerative apparatus 1102 interpret the control signal 1104 from the junction control section 1201 as if they were the depression of an actual keyboard, and mouse actuation, and operates in order to send a control signal 1104 to the contents playback software in a regenerative apparatus 1102 by the same interprocess communication function also with this operation gestalt -- such a means

enables a control unit 1103 to change the display condition of a regenerative apparatus 1102.

[0110] In addition, it is also possible to realize the format of an usable compression video data like the 1st operation gestalt using storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory with same . and the same image data repeating installation 103 of this operation gestalt as the format of the compression video data in the 1st operation gestalt with this operation gestalt.

[0111] As mentioned above, with the gestalt of this operation, the contents data 110 can be expressed as the terminal 106 without the display capabilities of the data (HTML) concerned by changing into a compression video data the homepage described with the contents data 110 in service provision equipment 109, i.e., HTML, with the service repeating installation 1101. Moreover, it becomes possible to perform actuation of migration (scrolling display) in the display by the whole contents data 110, the enlarged display of a part of arbitration, and the direction of four directions of the contents data 110, and display-coming modification of the contents data 110 based on the link information (URL) in the contents data 110, at a terminal 106 to the contents data 110 currently displayed, and the practical effectiveness is large.

[0112] (Gestalt 3 of operation) . which explains the 3rd operation gestalt of this invention using drawing 16 -20 -- the block diagram of the 3rd operation gestalt is shown in drawing 16 . drawing 16 -- setting -- 1601 -- service repeating installation and 1602 -- a control unit -- it comes out. Other components are the same as the component in the gestalt of the 2nd operation. The main difference between the configuration of the 3rd operation gestalt and the configuration of the 2nd operation gestalt is the control unit 1602 in the service repeating installation 1601.

[0113] Although the . terminal 106 explaining the gestalt of the use which this operation gestalt assumes first is the same as the terminal 106 in the gestalt of the 2nd operation, the contents data 110 to display differ. The contents data 110 currently assumed with the gestalt of the 3rd operation are a homepage described in HTML (Hyper Text Markup Language), and, in addition to alphabetic data and still picture data, are constituted by the animation using computer graphics.

[0114] When displaying such contents data 110 on a terminal 106, the whole contents data 110 is reduced and displayed first. The contents data 110 displayed on the terminal 106 with the natural thing have the low visibility of details. Then, a part of arbitration of the contents data 110 is expanded to the scale factor of arbitration with the manual operation button 117 provided to the terminal 106, and the detail of the contents data 110 is displayed. In addition, the homepage currently displayed is moved vertically and horizontally, or other homepages associated in URL (Universal Resource Locator) are chosen and displayed.

[0115] Next, the . control unit 1602 explaining actuation and its implementation means of this operation gestalt is explained. The configuration of a control unit 1602 is shown in drawing 17 . drawing 17 -- setting -- 1701 -- a junction control section and 1702 -- a channel with network interface 116b, and 1703 -- a channel with network interface 115b -- it comes out. Other components are the same as the component of the control unit 1103 in the gestalt of the 2nd operation.

[0116] Communications control **** 202 performs fundamental control of the communication link with a terminal 106 and the service repeating installation 1601 like the 2nd operation gestalt. After the communication link with a terminal 106 and the service repeating installation 1601 is established by the communications control section 202, the main functions of a control unit 1602 are offered by the junction control section 1701. The junction control section 1701 performs selection of data sent to terminal 106, i.e., alphabetic data, and compression video data ** like the case of the 2nd operation gestalt.

[0117] The contents data 110 are changed into a compression video data, and the processing sent to a terminal 106 is explained. The difference between . book operation gestalt and the 2nd operation gestalt only explaining a part different here from the 2nd operation gestalt is a point that the contents data 110 of this operation gestalt are accompanied by the motion. That is, although the contents data [in / on the other hand / this operation gestalt] 110 although the contents data 110 in the 2nd operation gestalt are the homepage described in HTML which consists of alphabetic data or still picture data are the

homepage described in HTML, they contain the animation using computer graphics etc.

[0118] Actuation and the implementation means of each component in the case of performing migration (scrolling display) in the same actuation as the 2nd operation gestalt, i.e., the display by the whole contents data 110 and the enlarged display of a part of arbitration, and the direction of four directions of the contents data 110, and making a display change of the contents data 110 based on the link information (URL) in the contents data 110 are explained to such contents data 110.

[0119] The display by the whole contents data 110 and the enlarged display of a part of arbitration are similar with the approach of carrying out the enlarged display of some contents data 110 indicated to explanation of the 1st operation gestalt. Difference is a point that dynamic-image coding equipment 104 always usually operates by the cine mode. In order to accompany by motion the contents data 110 it is assumed with this operation gestalt that described previously, they must always usually be a cine mode. Therefore, the junction control section 1701 always usually makes a cine mode the mode of operation in the control information memory 304 of operation, and operates dynamic-image coding equipment 104. By doing in this way, the display by the whole contents data 110 and the enlarged display of a part of arbitration accompanied by a motion are realizable.

[0120] Next, the actuation and the implementation means of this operation gestalt in migration in the direction of four directions of the contents data 110 and display modification of the contents data 110 based on the link information (URL) in the contents data 110 are explained.

[0121] The junction control section 1701 like the 2nd operation gestalt to the storage of the interior The information about the contents data 110 stored in the control information memory 304 of operation, Namely, the location (xd0, yd0) and magnitude Xd of the bit map data 403 which are stored in the image data repeating installation 103 and which can be encoded, Yd, and the location (xt0, yt0) and magnitude Xt of a field 405 which are actually encoded within bit map data, The location of the pointing cursor in the number of pixels which holds Yt, in addition expresses one transfer unit to the direction of four directions of a regenerative apparatus 1102, and a field 405, and the number of pixels showing one transfer unit of pointing cursor are held. Since actuation of most of terminals 106 and junction control sections 1701 is the same as the 2nd operation gestalt, only difference is described here.

[0122] The mode of operation of the dynamic-image coding equipment 104 in this operation gestalt is always usually a cine mode. Therefore, the flow of the junction control section 1701 in migration in the direction of four directions of the contents data 110 of operation becomes like drawing 18. Moreover, the flow of the junction control section 1701 in migration of pointing cursor and selection decision of a link information of operation becomes like drawing 19 and drawing 20, respectively.

[0123] Each step [in / in each step in drawing 18 / drawing 13] and the . step 1801 which corresponds as follows are the same processings as the same processing as step 1301, step 1802 step 1303, the processing step 1803 same step 1304, the processing step 1804 same step 1305, and the processing step 1805 same step 1306.

[0124] Each step [in / in each step in drawing 19 / drawing 14] and the . step 1901 which corresponds as follows are the same processings as the same processing as step 1401, step 1902 step 1403, the processing step 1903 same step 1404, the processing step 1904 same step 1405, and the processing step 1905 same step 1406.

[0125] Each step [in / in each step in drawing 20 / drawing 15] and the . step 2001 which corresponds as follows are the same processing as step 1501, and the same processing as step 2002 step 1503. That is, the junction control section 1701 in this operation gestalt works so that dynamic-image coding equipment 104 may always usually be operated by the cine mode.

[0126] In addition, the format of a compression video data usable with this operation gestalt is the same as the format of the compression video data in the 1st operation gestalt. Moreover, it is also possible to realize like the 1st operation gestalt with the image data repeating installation 103 of this operation gestalt using storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory.

[0127] As mentioned above, with the gestalt of this operation, the contents data 110 can be expressed as the terminal 106 without the display capabilities of the data concerned by changing a homepage with

data accompanied by a motion, such as : animation by CG, into a compression video data with the service repeating installation 1601 by being described with the contents data 110 in service provision equipment 109, i.e., HTML. Moreover, it becomes possible to perform actuation of migration (scrolling display) in the display by the whole contents data 110, the enlarged display of a part of arbitration, and the direction of four directions of the contents data 110, and display-coming modification of the contents data 110 based on the link information (URL) in the contents data 110, at a terminal 106 to the contents data 110 currently displayed, and the practical effectiveness is large.

[0128] (Gestalt 4 of operation) . which explains the 4th operation gestalt of this invention using drawing 21 -22 -- the block diagram of the 4th operation gestalt is shown in drawing 21 . the voice data with which dynamic-image coding equipment and 2103 are contained in a control device, and 2104 is contained [2101] in the contents data 110 for service repeating installation and 2102 in drawing 21 , and 2105 -- the control signal of dynamic-image coding equipment 2102, and 2106 -- the communication terminal for multimedia, and 2107 -- a dynamic-image regenerative apparatus -- it comes out. Other components are the same as the component in the gestalt of the 1st operation. The main differences between the configuration of the 4th operation gestalt and the configuration of the 1st operation gestalt are the dynamic-image coding equipment 2102 and the control device 2103 in the service repeating installation 2101, and the dynamic-image regenerative apparatus 2107 in the communication terminal 2106 (it is hereafter described as a terminal) for multimedia.

[0129] . explaining the gestalt of the use which this operation gestalt assumes first -- the contents data 110 and the digital static image which are stored in service provision equipment 109 are displayed on a terminal 2106 like the 1st operation gestalt. In addition to still picture data, at this time, the contents data 110 have voice data. Therefore, at a terminal 2106, voice data is reproduced to a display and coincidence of a still picture.

[0130] Next, in addition to the function which decodes and displays the same compression video data as the dynamic-image regenerative apparatus 107 in the 1st operation gestalt, the dynamic-image regenerative apparatus 2107 in the . terminal 2106 explaining actuation and the implementation means of this operation gestalt has the function which decodes the voice data sent to coincidence and is reproduced.

[0131] . drawing 22 which shows the block diagram of dynamic-image coding equipment 2102 to drawing 22 -- setting -- 2201 -- the voice codec section and 2202 -- the multiplexing section and 2203 -- control information memory of operation and 2204 -- multiplexing AV data and 2205 -- a control signal -- it comes out. Other components are the same as the component of the dynamic-image coding equipment 104 in the 1st operation gestalt.

[0132] The information which specifies actuation of dynamic-image coding equipment 2102 is stored in the control information memory 2204 of operation via the control signal 2105. the information for which the information stored in the control-information memory 2204 of operation is stored in the control-information memory 304 of operation in the 1st operation gestalt in this operation gestalt -- in addition, the storing location of voice data 2104, the amount of data and the coding format of voice data 2104, the coding format of the voice data which a bit rate and the voice codec section 2201 output, and a bit rate and the bit rate of the multiplexing AV data 2204 which the multiplexing section 2202 outputs -- it comes out.

[0133] Since generation of the compression video data in . dynamic-image coding equipment 2102 explaining actuation of dynamic-image coding equipment 2102 is the same as the 1st operation gestalt, it describes only a different part from actuation of the dynamic-image coding equipment 104 in the 1st operation gestalt here.

[0134] If the control signal 2205 meaning the initiation of operation from the data acquisition section 301 is received, drawing will be minded for information required for generation of voice data from the control information memory 2204 of operation, and the voice codec section 2201 will mind a channel 112 and network interface 116ab for the specified voice data from service provision equipment 109, and will change and output them to the voice data of drawing and assignment.

[0135] If the control signal 2205 meaning the initiation of operation from the data acquisition section

301 is received, the multiplexing section 2202 will multiplex the compression video data from drawing and the dynamic-image coding section 303, and the voice data from the voice codec section 2201 for information required for multiplexing processing from the control information memory 2204 of operation, will generate the multiplexing AV data 2204, and will send them to a terminal 2106.

[0136] A control unit 2103 performs control processing so that dynamic-image coding equipment 2102 may operate through a control signal 2105, as described previously. Moreover, a control device 2103 performs fundamental control of the communication link with the service repeating installation 2101 and a terminal 2106 like the control device 105 in the 1st operation gestalt.

[0137] In addition, the format of a compression video data usable with this operation gestalt is the same as the format of the compression video data in the 1st operation gestalt. Moreover, it is also possible to realize like the 1st operation gestalt with the image data repeating installation 103 of this operation gestalt using storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory.

[0138] As mentioned above, by changing the contents data 110 in service provision equipment 109, i.e., still picture data with voice data, into multiplexing AV data with the service repeating installation 2101 with the gestalt of this operation, the contents data 110 can be expressed as the terminal 2106 without the display capabilities of the data concerned, and the practical effectiveness is large.

[0139] (Gestalt 5 of operation) . which explains the 5th operation gestalt of this invention using drawing 23 -- the block diagram of the 5th operation gestalt is shown in drawing 23 . it sets to drawing 23 , and and it comes out of 2301. [service provision] Other components are the same as the component in the gestalt of the 1st operation. The main difference between the configuration of the 5th operation gestalt and the configuration of the 1st operation gestalt is having considered as the configuration which does not need the service repeating installation 101. The gestalt of the use which this operation gestalt assumes first is the same as the gestalt of the use which the 1st operation gestalt assumes.

[0140] Next, the . regenerative apparatus 102 and control unit 105 explaining actuation of this operation gestalt perform drawing and subsequent processings for the direct contents data 110, without using network interface 116ab and a channel 112 like the 1st operation gestalt.

[0141] In addition, the format of a compression video data usable with this operation gestalt is the same as the format of the compression video data in the 1st operation gestalt. Moreover, also in this operation gestalt, it is possible to use storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory with the image data repeating installation 103 as well as the 1st operation ****.

[0142] As mentioned above, with the gestalt of this operation, a still picture can be expressed as the terminal 106 without a still picture display function by changing static-image data, such as the contents data 110 in service provision equipment 109, i.e., a JPEG format etc., into a compression video data. Moreover, a still picture can be displayed by high definition comparable as former image quality by generating the compression video data based on a gradual image quality complement. By furthermore using video memory (V-RAM) for the image data repeating installation 103, available still picture display software can be used easily [a commercial item etc.], service repeating installation 101 corresponding to the contents data 110 of various data format can be realized easily, and the practical effectiveness is large.

[0143] (Gestalt 6 of operation) . which explains the 6th operation gestalt of this invention using drawing 24 -- the block diagram of the 6th operation gestalt is shown in drawing 24 . it sets to drawing 24 , and and it comes out of 2401. [service provision] Other components are the same as the component in the gestalt of the 2nd operation. The main difference between the configuration of the 6th operation gestalt and the configuration of the 2nd operation gestalt is having considered as the configuration which does not need the service repeating installation 1101. The gestalt of the use which this operation gestalt assumes first is the same as the gestalt of the use which the 2nd operation gestalt assumes.

[0144] Next, the . regenerative apparatus 1102 and control unit 1103 explaining actuation of this operation gestalt perform drawing and subsequent processings for the direct contents data 110, without using network interface 116ab and a channel 112 like the 2nd operation gestalt.

[0145] In addition, this operation gestalt of it being easily applicable to the gestalt of the use which the 3rd operation gestalt assumes is obvious. Furthermore, the format of a compression video data usable with this operation gestalt is the same as the format of the compression video data in the 1st operation gestalt. Moreover, also in this operation gestalt, it is possible to use storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory with the image data repeating installation 103 as well as the 1st operation ****.

[0146] As mentioned above, with the gestalt of this operation, the contents data 110 can be expressed as the terminal 106 without the display capabilities of the data concerned by changing into a compression video data the homepage described with the contents data 110 in service provision equipment 109, i.e., HTML. Moreover, it becomes possible to perform actuation of migration (scrolling display) in the display by the whole contents data 110, the enlarged display of a part of arbitration, and the direction of four directions of the contents data 110, and display-coming modification of the contents data 110 based on the link information (URL) in the contents data 110, at a terminal 106 to the contents data 110 currently displayed.

[0147] (Gestalt 7 of operation) . which explains the 7th operation gestalt of this invention using drawing 25 -- the block diagram of the 7th operation gestalt is shown in drawing 25 . In drawing 25 , 2501 is service provision equipment. Other components are the same as the component in the gestalt of the 4th operation. The main difference between the configuration of the 7th operation gestalt and the configuration of the 4th operation gestalt is having considered as the configuration which does not need the service repeating installation 2101. The gestalt of the use which this operation gestalt assumes first is the same as the gestalt of the use which the 4th operation gestalt assumes.

[0148] Next, the . regenerative apparatus 102 and control unit 2103 explaining actuation of this operation gestalt perform drawing and subsequent processings for the direct contents data 110, without using network interface 116ab and a channel 112 like the 4th operation gestalt.

[0149] In addition, the format of a compression video data usable with this operation gestalt is the same as the format of the compression video data in the 1st operation gestalt. Moreover, also in this operation gestalt, it is possible to use storage like semiconductor memory, such as DRAM, or a magnetic disk drive as an alternative means of video memory with the image data repeating installation 103 as well as the 1st operation ****.

[0150] As mentioned above, by changing the contents data 110 in service provision equipment 109, i.e., still picture data with voice data, into multiplexing AV data with the gestalt of this operation, the contents data 110 can be expressed as the terminal 2106 without the display capabilities of the data concerned, and the practical effectiveness is large.

[0151] in addition, this invention -- setting -- the gestalten 1-4 of operation -- setting -- ** service provision equipment 109 (server S) and the service repeating installation 101 (Gateway G W) -- dissociating -- **** -- on the other hand -- the gestalten 5-7 of operation -- setting -- ** -- although they are unifying, as for each, the case of being as follows is assumed. That is, it is a case (drawing 27) when the contractor who offers the case where it is considered to be inefficient in respect of cost etc. many servers exist and prepare GW in each as a gestalt of **, and a network infrastructure installs GW himself (drawing 26), as the contractor who offers the case where the server has prepared GW in each, and a network infrastructure, as a gestalt of ** is not installing GW himself etc., and is this invention. The optimal each of these situations system configuration can be offered.

[0152]

[Effect of the Invention] According to this invention as mentioned above, it is to the 1st (two or more contents data are stored and a demand is accepted contents data via a network interface), The service provision equipment which can be sent out, and gradual image quality complement mold coding generate a high-definition compression video data from static-image data. The dynamic-image coding equipment which can be sent out to a playback terminal via the 2nd network interface, The contents data playback software which works on a common personal computer can be used as a regenerative apparatus. The image data repeating installation which relays the static-image data of the contents data origin obtained when this equipment reproduces the contents data obtained from service provision

equipment via the network interface to dynamic-image coding equipment, By having had the service repeating installation which consists of a control device which can receive button grabbing in a playback terminal, can determine the field of the static-image data encoded to a compression video data, and can tell dynamic-image coding equipment It becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal at the playback terminal without the capacity which displays desired contents data.

[0153] The 2nd (two or more contents data are stored and a demand is accepted contents data via a network interface), By the service provision equipment which can be sent out, and gradual image quality complement mold coding being able to generate a high-definition compression video data from static-image data, and changing a setup of coding processing at every need The dynamic-image coding equipment which the contents can generate a compression video data from the static-image data which change serially, and can send out to a playback terminal via the 2nd network interface, The contents data playback software which works on a common personal computer can be used as a regenerative apparatus. The image data repeating installation which relays the static-image data of the contents data origin obtained when this equipment reproduces the contents data obtained from service provision equipment via the network interface to dynamic-image coding equipment, Button grabbing in a playback terminal can be received, the control signal for changing the condition of a display of a regenerative apparatus can be generated, and it can send to a regenerative apparatus. Moreover, by having had the service repeating installation which consists of a control device which can determine the field of the static-image data encoded to a compression video data, and can tell dynamic-image coding equipment Desired contents data can be expressed as a playback terminal without the capacity which displays desired contents data. In addition, it enables relation to carry out contents data display by carrying out the enlarged display of a part of arbitration of the contents data displayed on the playback terminal, and moving the contents of a display vertically and horizontally, and choosing the displayed link information as arbitration.

[0154] The 3rd (two or more contents data are stored and a demand is accepted contents data via a network interface) A high-definition compression video data is generable from static-image data with the service provision equipment which can be sent out, and gradual image quality complement mold coding. Moreover, the voice data of data-format ** specified from the voice data contained in contents data is generable. The dynamic-image coding equipment which can multiplex a compression video data and voice data, can generate multiplexing AV data, and can be sent out to a playback terminal via the 2nd network interface, The contents data playback software which works on a common personal computer can be used as a regenerative apparatus. The image data repeating installation which relays the static-image data of the contents data origin obtained when this equipment reproduces the contents data obtained from service provision equipment via the network interface to dynamic-image coding equipment, By having had the service repeating installation which consists of a control device which can receive button grabbing in a playback terminal, can determine the field of the static-image data encoded to a compression video data, and can tell dynamic-image coding equipment It becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could express desired contents data as the playback terminal without the capacity which displays desired contents data with audio playback, in addition were displayed on the playback terminal.

[0155] The dynamic-image coding equipment which can generate a high-definition compression video data from static-image data by gradual image quality complement mold coding to the 4th, and can be sent out to a playback terminal via a network interface, The contents data playback software which works on a common personal computer can be used as a regenerative apparatus. The image data repeating installation which relays the static-image data of the contents data origin obtained when this equipment reproduces contents data to dynamic-image coding equipment, The control unit which can receive button grabbing in a playback terminal, can determine the field of the static-image data encoded to a compression video data, and can tell dynamic-image coding equipment, Two or more contents data are stored and a demand is accepted. Contents data via a network interface At a playback terminal.

without the capacity which displays desired contents data by having had service provision equipment which can be sent out It becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal.

[0156] By gradual image quality complement mold coding being able to generate a high-definition compression video data to the 5th from static-image data, and changing a setup of coding processing into it at every need The dynamic-image coding equipment which the contents can generate a compression video data from the static-image data which change serially, and can send out to a playback terminal via a network interface, The contents data playback software which works on a common personal computer can be used as a regenerative apparatus. The image data repeating installation which relays the static-image data of the contents data origin obtained when this equipment reproduces contents data to dynamic-image coding equipment, Button grabbing in a playback terminal can be received, the control signal for changing the condition of a display of a regenerative apparatus can be generated, and it can send to a regenerative apparatus. Moreover, the control unit which can determine the field of the static-image data encoded to a compression video data, and can tell dynamic-image coding equipment, Two or more contents data are stored and a demand is accepted. Contents data via a network interface At a playback terminal without the capacity which displays desired contents data by having had service provision equipment which can be sent out The enlarged display of a part of arbitration of the contents data which could display desired contents data, in addition were displayed on the playback terminal is carried out. Moreover, the thing of relation to do for contents data display becomes possible by moving the contents of a display vertically and horizontally, and choosing the displayed link information as arbitration.

[0157] To the 6th, a high-definition compression video data is generable from static-image data with gradual image quality complement mold coding. Moreover, the voice data of data-format ** specified from the voice data contained in contents data is generable. The dynamic-image coding equipment which can multiplex a compression video data and voice data, can generate multiplexing AV data, and can be sent out to a playback terminal via a network interface, The contents data playback software which works on a common personal computer can be used as a regenerative apparatus. The image data repeating installation which relays the static-image data of the contents data origin obtained when this equipment reproduces contents data to dynamic-image coding equipment, The control unit which can receive button grabbing in a playback terminal, can determine the field of the static-image data encoded to a compression video data, and can tell dynamic-image coding equipment, Two or more contents data are stored and a demand is accepted. Contents data via a network interface At a playback terminal without the capacity which displays desired contents data by having had service provision equipment which can be sent out It becomes possible to carry out the enlarged display of a part of arbitration of the contents data which could display desired contents data with audio playback, in addition were displayed on the playback terminal.

[Translation done.]

* NOTICES *

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] Store contents data and data acquisition is carried out from the service provision equipment which can transmit contents data according to a demand. A playback means to be equipment which provides a user terminal with the data concerned in a format as it is or the changed format, and to reproduce contents data, An image data junction means to relay the static-image data of the contents data origin reproduced by the playback means to a dynamic-image coding means, A dynamic-image coding means to generate a high-definition compression video data from static-image data by gradual image quality complement mold coding which is the coding method which complements image quality gradually, and to send out to a user terminal, Information offer equipment equipped with the control means which can receive the actuation from a user terminal, can determine the field of the static-image data encoded by the compression video data, and can be conveyed to a dynamic-image coding means.

[Claim 2] Information offer equipment according to claim 1 with which the contents are characterized by what a compression video data is generated for from the static-image data which change serially when a control means can receive actuation of a user terminal, can generate the control signal for changing the condition of playback of a playback means, it can send to a playback means and a dynamic-image coding means changes a setup of coding processing at every need.

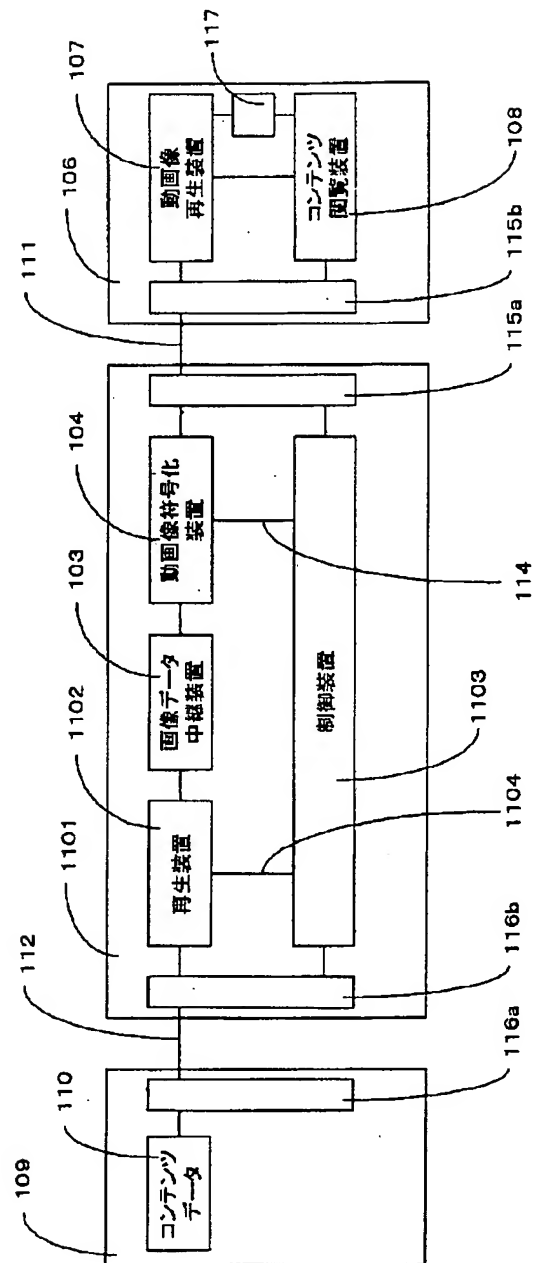
[Claim 3] Information offer equipment according to claim 1 characterized by generating the voice data of the data format specified from the voice data contained in contents data, for a dynamic-image coding means multiplexing a compression video data and voice data, generating multiplexing AV data, and sending out to a user terminal.

[Claim 4] An are recording means to be equipment which provides a user terminal with data according to a demand, and to store contents data, A playback means to reproduce contents data, and an image data junction means to relay the static-image data of the contents data origin reproduced by the playback means to a dynamic-image coding means, A dynamic-image coding means to generate a high-definition compression video data from static-image data by gradual image quality complement mold coding which is the coding method which complements image quality gradually, and to send out to a user terminal, Information offer equipment equipped with the control means which can receive the actuation from a user terminal, can determine the field of the static-image data encoded by the compression video data, and can be conveyed to a dynamic-image coding means.

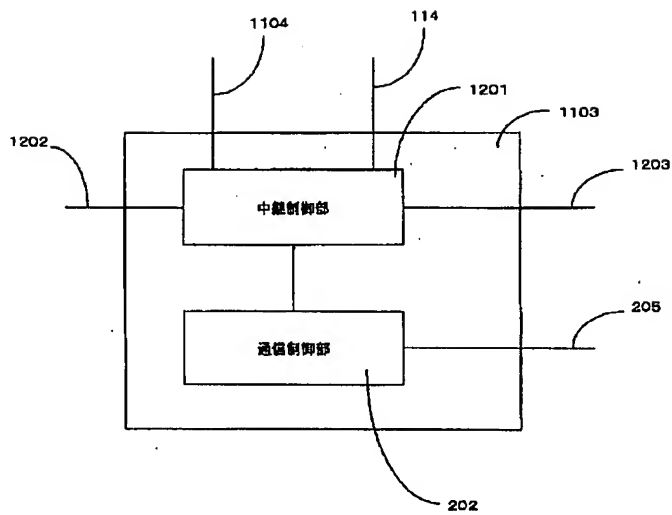
[Claim 5] Information offer equipment according to claim 4 with which the contents are characterized by what a compression video data is generated for from the static-image data which change serially when a control means can receive actuation of a user terminal, can generate the control signal for changing the condition of playback of a playback means, it can send to a playback means and a dynamic-image coding means changes a setup of coding processing at every need.

[Claim 6] Information offer equipment according to claim 4 characterized by generating the voice data of the data format specified from the voice data contained in contents data, for a dynamic-image coding means multiplexing a compression video data and voice data, generating multiplexing AV data, and sending out to a user terminal.

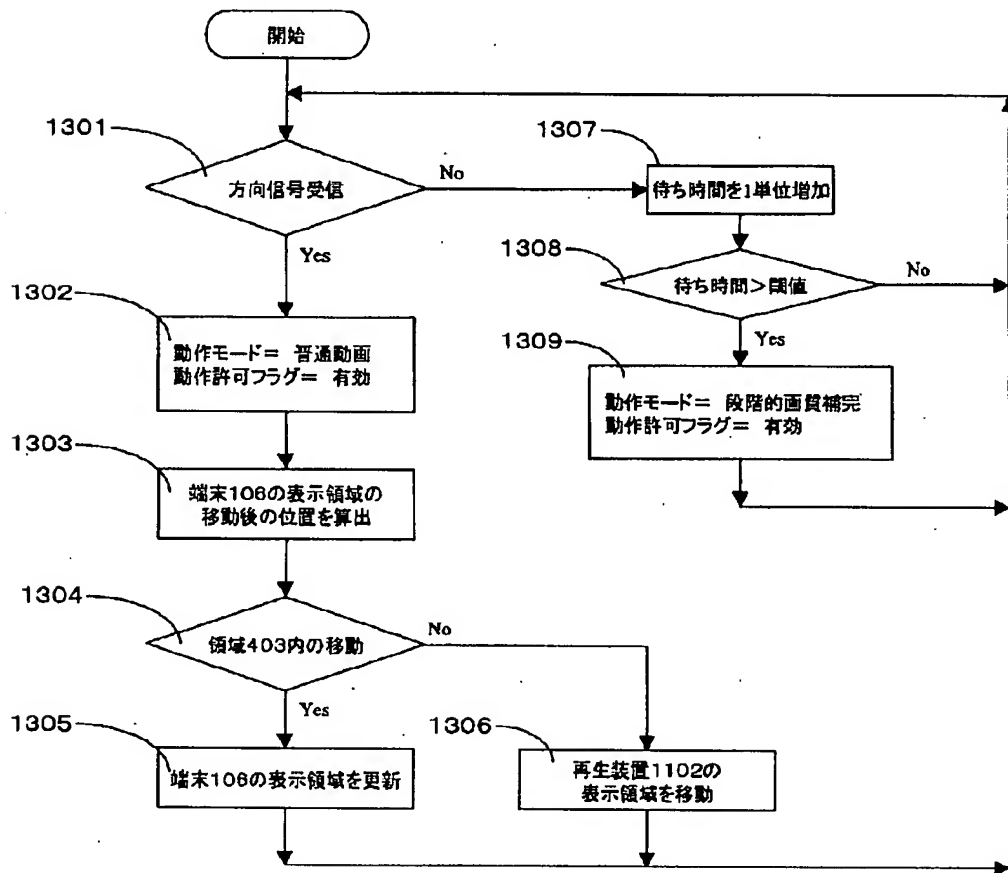
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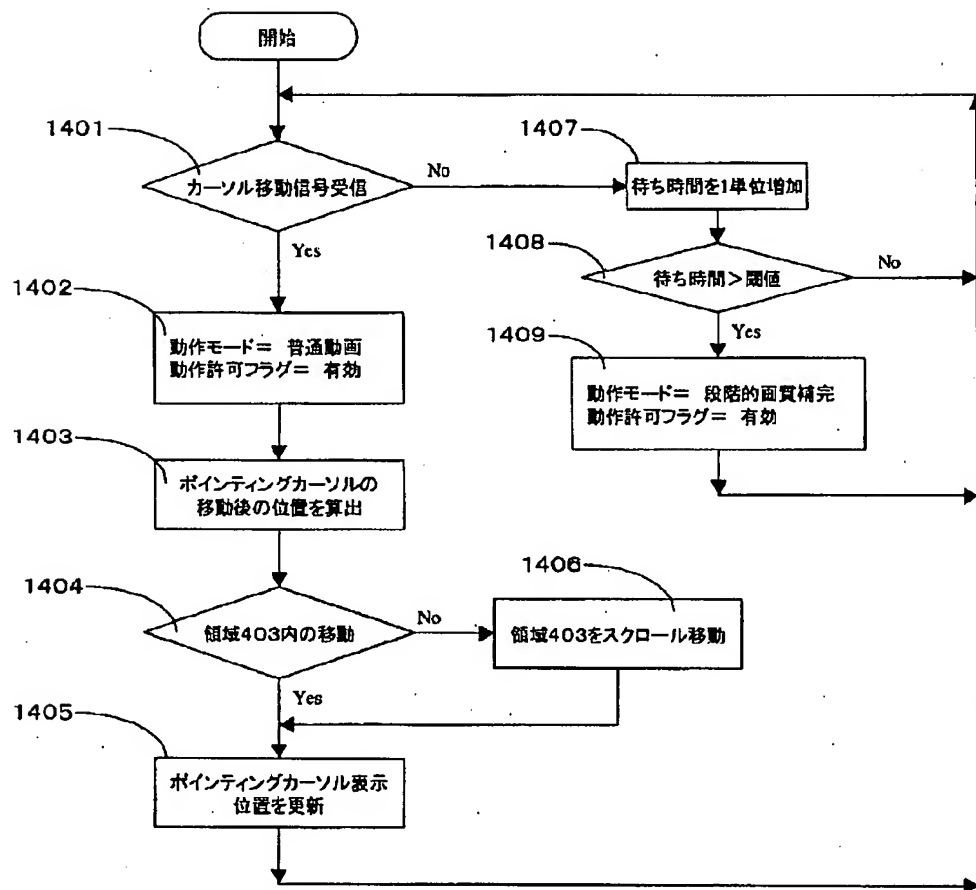
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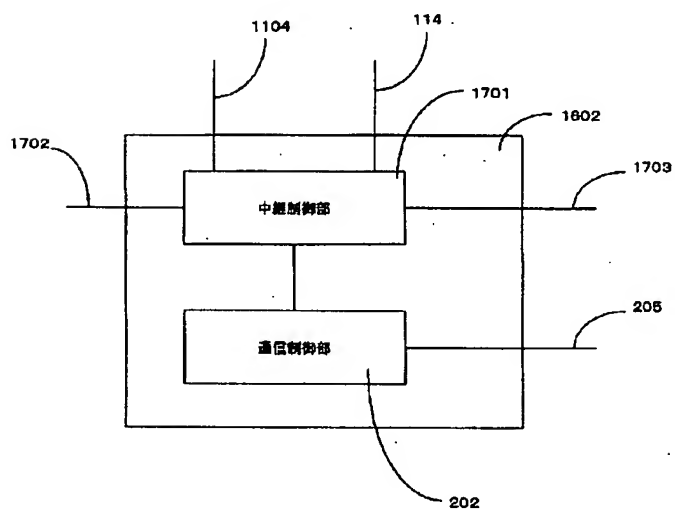
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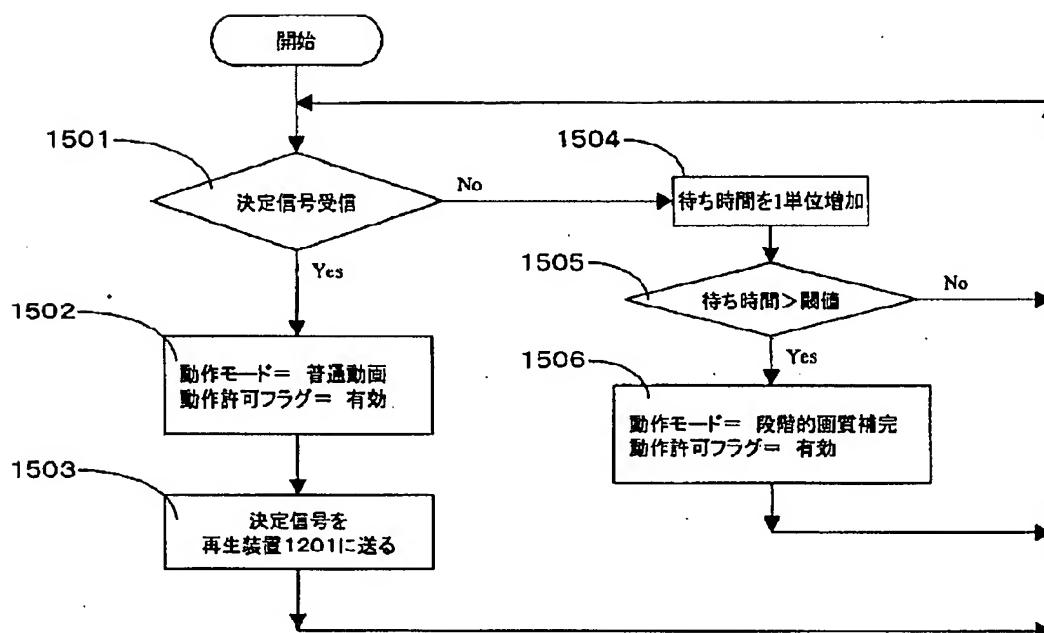
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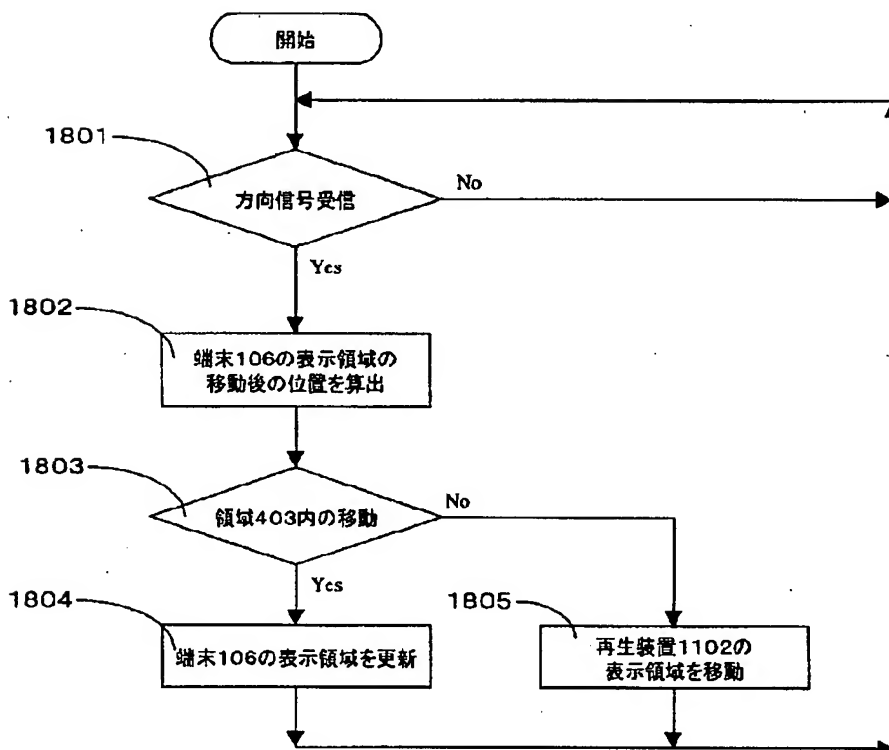
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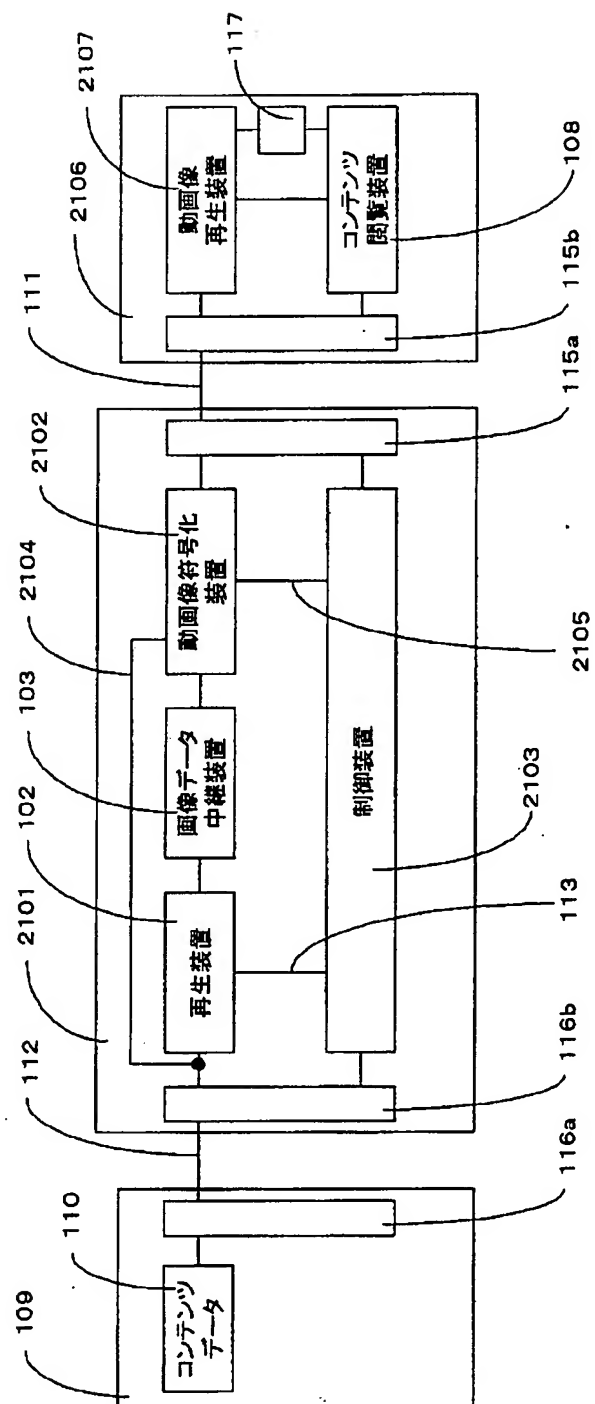
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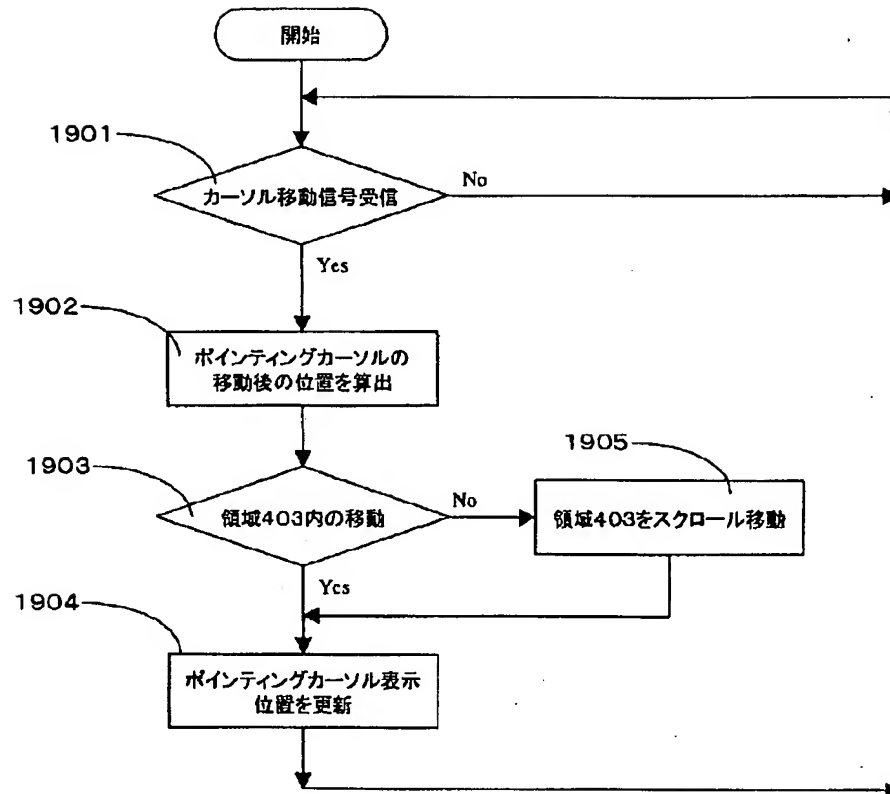
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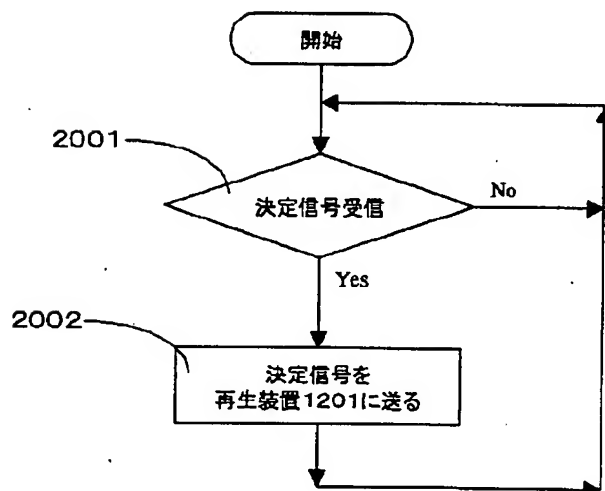
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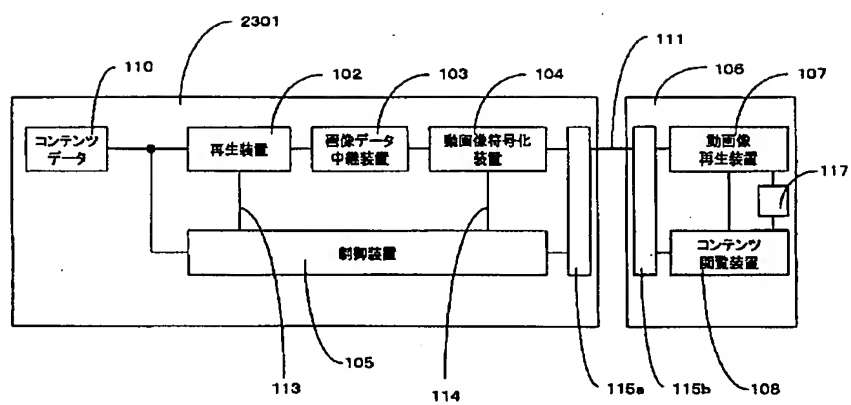
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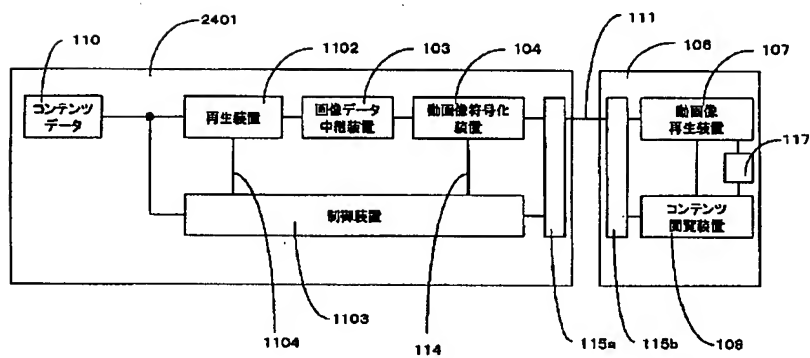
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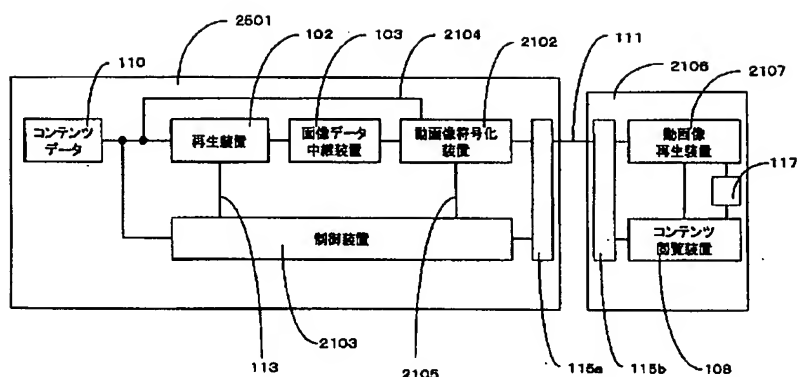
【図23】



【図24】



【図25】



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